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ORIGINAL ARTICLE

Divergence of nature myths and social relations: Polish state foresters between hierarchical and egalitarian contexts

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Abstract

On the basis of a survey among Polish foresters, the socio-cultural context of the Polish state forest organization is explored. The study is based upon Grid-group cultural theory, which assumes four political cultures (hierarchical, egalitarian, individualistic, fatalistic). These cultures comprise different perceptions of nature, compassed as nature myths. Yet testing the influence of the adherence to these nature myths on some variables (organizational level, main tasks, years in forestry, gender) showed that they are not a highly discriminating factor in this regard. However, they seem to influence opinions on the need for adaptation to climate change. Those foresters adhering to the hierarchical nature myth, who are the majority, consider it to be less important than the other foresters. Through additional measurements, it could also be shown that the socio-cultural context of state foresters is not only hierarchical, but also egalitarian. This is attributed to the particularities of the foresters' work that requires flexibility when dealing with nature.

Key words

Grid-group cultural theory, nature myths, social relations, state foresters, survey, Poland

Introduction

Grid-group cultural theory

Upon observing that resource managers reacted quite differently in similar situations, Holling (1986) and Timmerman (1986) analysed these differences in behaviour and were able to categorize them by drawing on the different perceptions of the stability of ecosystems held by the resource managers. Thompson et al. (1990) integrated these findings in Grid-group cultural theory as nature myths. Grid-group cultural theory was developed by Douglas and first applied to environmental problems and risks by Douglas and Wildavsky (1982). It claims "that the world ticks the way it does due to selective affinity and mutual dependency between social relations, cultural biases, and behavioral strategies" (Hoppe 2007).

There are hierarchical, egalitarian, individualistic and fatalistic cultures that are interdependent, that is, each needs the other to legitimate itself and there cannot be fewer. There can be more cultures but these are, together with that of the hermit, the only ones viable in the long term. The shared values and beliefs of one culture are compatible only with certain social relations that

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justify them. These social relations are characterized by two dimensions, namely – in short – the degree of belonging to a bounded social unit (group) and the degree of being affected by prescribed rules (grid). High group means community is strong, high grid means social life is highly prescribed by many rules. The hierarchical culture is characterized by high grid and high group values, the egalitarian culture by low grid but high group values, the individualistic culture by low grid and low group values, and the fatalistic culture by high grid but low group values (Thompson et al. 1990).

This typology is not deterministic and serves as a heuristic device within a much broader and deeper sociological theory about collective action, with the relationship of social institutions and the beliefs and ways of thinking that go along with them at its core (Tansey 2004). There are no such individuals like "hierarchists" or "fatalists", but there are cultural contexts within which social actors operate and which enable some forms of behaviour and constrain others.

Concerning the perception of nature and preferred management styles, it is assumed that the hierarchical culture supports the perception of nature as tolerant but vulnerable to surpassing ultimate limits (perverse/tolerant) and a control management style. The egalitarian culture supports the perception of nature as very vulnerable or "ephemeral*"* and thus a cautious and preventive management style. The individualistic culture supports the perception of nature as benign and its abundance as opportunity. It advocates a pragmatic, trial-and-error management style. Finally, the fatalistic culture mediates the perception of nature as a lottery or as "capricious", rather than being controllable or manageable (Schwarz and Thompson 1990; Thompson et al. 1990).

The specific feature of Grid-group cultural theory is that it is independent from current or historic societal conditions. It is applicable among different organizations or other social units, as the basic parameters, the grid and group dimensions are inherent to every human social interaction. This distinguishes its typology from those connected with specific values of the forestry profession, as developed for example by Pregernig (2001) for Austria or Rekola et al. (2010) for Scandinavian countries. Thus, it can be used to elaborate the basic principles held by different societal or professional groups, for example forest professionals and nature conservationists. It is especially helpful in cases where more than current interests are involved and the parties seem to be divided by contradicting certainties due to different understandings of how the world is.

This can be said for climate change. It might be taken as a probable serious threat, depending on the knowledge and indicators about it (hierarchical), as a catastrophic threat (egalitarian) or no threat at all because the environment will adapt to changes (individualistic). In the context of a fatalistic culture, nature is taken as uncontrollable anyway. None of these different ways of thinking about climate change is the right one, because each of it uses "impeccable logic to derive their conclusions from different premises" (Schwarz and Thompson 1990). Further studies on this issue have been contributed for example by Verweij et al. (2006) or Pendergraft (1998). In this study, the Polish state foresters' opinion on adaptation needs of forestry is discussed on the basis of this approach. Such issues that challenge forest management practices are always embedded in already existing paradigms. For forest management, Schanz (1996) first applied Grid-group cultural theory to explain differences in the definition of sustainable forest management. By distinguishing different dimensions, he arrives at a typology of such definitions as shown in Tab. 1. That there are indeed basically different and conflicting ideas about "the right" sustainable forest management could be observed e.g. in Germany during a long dispute about how to define "good practice" in forest management, when politics considered integrating its definition in the Federal Forests Act (Winkel and Memmler 2007).

This theoretically based typology can be used to identify different perspectives of different societal actors on contested issues of forest management. So, which cultural contexts do state foresters live in and does this affect their perception of contented issues such as adaptation to climate change? As I showed in a previous article (Storch 2011), German foresters strongly tend towards the hierarchical nature myth (80%). The same could be found for Dutch foresters (74%) (Hoogstra and Schanz 2007). I argued that this is typical for a context in which professionals are supposed to manage natural resources within sound limits (Storch 2011). As shown below, the majority of Polish state foresters also adhere to the hierarchical nature myth (84%). In addition to these surveys, qualitative studies on state forest organizations add to the picture of cultural context in forestry.

Tab. 1. Four basic types of definitions of "sustainable forest management" depending on the cultural context (Schanz 1996)

	Cultural Context (enabling the following definition)			
	Hierarchical	Egalitarian	Individualistic	Fatalistic
Sustainable forest management	…means designing the relationship between forest and humans through			
	well-regulated action	sensible and responsible action	free action	responding action
	… of individuals and societal groups, which is			
	governed and controlled by institutions	coordinated by institutions	enabled by institutions	determined by incidents
	… and which aims at satisfying societal claims and needs			
	with consideration of the natural cycles of forests	integrated into the natural cycles of the forests	through the use of forests	
	… as far as possible today and through			
	anticipation of developments and precaution	maintenance of as many options as possible	maintenance of suitable options	responding to events
	… also in the future. It should be designed			
	for the short and the long term	rather for the long term	rather for the short term	for the immediate future
	preferably for the large-scale	preferably for the small-scale	spatially adapted	for the individual space

Lawrence (2009), for example, contributed case studies on the evolution of the professional forestry culture in Poland and Romania. There, the Forest Department of both countries is described as a 'state within a state', where a "hierarchical 'command and control' approach" is practiced. When the organisational structure of the forestry administration in German Lands was established by Hartig around 1800, his vision of the Forest Department clearly carried hierarchical beliefs: "Every wheel that has to operate in this big and complex machine, does not only have to be shaped properly, but it also has to be connected in such a way, that each for itself can work towards an own, and all together can work towards a collective gist" (Georg-Ludwig-Hartig-Stiftung 1993). Thus, many indicators suggest that the state foresters' cultural context is a hierarchical one. This idea is explored more precisely in this study.

Study

As a first step, I take the nature myths as the basis for my empirical research. They are far from representing the whole idea of the different cultures, but they can be taken as indicators, as they are supposed to correspond to certain cultural contexts. To elaborate the understanding of the nature perception of foresters, I want to distinguish between the respondents who favoured the nature myth corresponding to the hierarchical culture and those who did not (let us call them non-mainstream). Does the non-mainstream have special characteristics? The characteristics I examine are the following: organizational level, main tasks at work, years in forestry and gender.

As Grid-group cultural theory suggests that the hierarchical culture is associated with high group and high grid values, I hypothesize that foresters, whose grid or group dimension can be assumed to be lower, might rather deviate from this mainstream. I assume this for:

- district foresters, who may have more leeway in their daily work (lower grid);
- foresters engaged in advisory services, rather than those engaged in sovereign tasks or forest inventory, as the latter may be more prescribed or formally structured (lower grid);
- new foresters, whose identification with the group of foresters may still be less strong (lower group);
- women, as the traditional culture of state foresters is rather male-oriented (lower group).

While these are factors the individual forester is subject to, I also examine the relation between nature perception and the opinion regarding the importance of adapting to climate change. I hypothesise that above all the ephemeral nature myth provides a context for taking climate change and the need for adaptation seriously, given that it is supposed to correspond with a preventive management style. The fatalistic culture just mediates a feeling of helplessness. In the hierarchical context, however, climate change will only be taken seriously when the surpassing of certain limits is anticipated. Adaptation measures will only be taken, when the effects of climate change are assumed to bring the forest ecosystems to their limits of resilience.

In a second step, I present how Polish foresters perceive their social relations measured directly with items that reflect group and grid values. This gives an insight into the foresters' social context at the workplace. Grid-group cultural theory assumes that the social context influences beliefs and values and thus also the understanding of sustainable forest management. The question here is whether the results will also characterize the state foresters' cultural context as a mainly hierarchical one or if they amend this picture with new aspects.

Material and methods

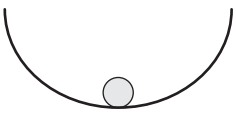
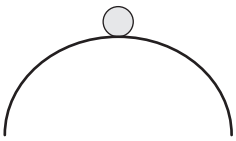
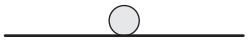
The nature myths are only a small and quite specific part of Grid-group cultural theory. The same goes for the grid/group typology, which is only a heuristic device and "the product of a century of sociological thinking and intensive empirical research about the nature of collective social action, the relationship between social institutions and cognition and the inherently political nature of social life" (Tansey 2004), primarily developed by Douglas (1987). Thus this paper cannot and does not intend to present a thorough study of Grid-group cultural theory. Tansey (2004) clearly shows the shortcomings and distortions that resulted from isolating small parts of Grid-group cultural theory. However, the typology of nature myths has been widely applied, also in the context of environmental policy and sociological studies, without referring to the broader context of the theory, not to mention the methods actually needed to conduct a systematic study of it. For example, it was used for the survey of environmental awareness in Germany every two years from 1996 to 2006 (Kuckartz 2011). With this in mind, this study is not meant to test Grid-group cultural theory, as it is solely based on the empirical data of one survey including some aspects of Grid-group cultural theory. However, it takes advantage of its categories and tools and adds to the studies that have already been conducted within the Grid-group cultural theory framework.

The survey design and data management was supported by the internet-based online survey software "EFS Survey" of Globalpark. Invitation emails were delivered in 2009 to all forest professionals of Lasy Państwowe listed on the homepages of all seventeen regional divisions, 541 persons in total. 324 persons looked at the questionnaire and 137 answered all questions, which constitutes a return of 25%. However, respondents could quit the questionnaire at any time meaning that the number of answers given changed slightly from question to question. Representativeness can only be assumed with 10% probability of error and 7% tolerable sampling error. An overview of the sample characteristics is given in table 2. The collected data was analysed with the statistical software package SPSS.

Tab. 2. Characteristics of the total sample of Polish state foresters, several answers possible for main tasks (sample size n in brackets)

Organizational level	District level	6,7% (9)
	Upper level	73,3% (99)
	Regional level	20,0% (27)
Main tasks (several answers possible)	Sovereign tasks	48% (63)
	Forest inventory	25% (33)
	Management planning	55% (72)
	Cultivation	45% (59)
	Nature protection/ landscape maintenance	58% (76)
	Advisory services	13% (17)
Age	Below 36	23,5% (32)
	36–45	35,3% (48)
	46–55	23,5% (32)
	Above 55	17,6% (24)
Years in forestry	Mean (stand. err./dev.)	20,23 years (0,99/11,49)
Gender	Female	19,5% (26)
	Male	80,5% (107)

Tab. 3. Depiction and wording of the nature perception categories as used for the 2009 survey among Polish foresters (pictures from Kuckartz 2006)

Properties of forest ecosystems Four pictures that illustrate different properties of forest ecosystems. Nature is always depicted as a ball. Please select from the four pictures the one that best represents your perception of nature! Please read the short explanations under the pictures as well, and decide spontaneously!	
	**The "benign forest ecosystem"** After all, nature is arranged so as to always return to the state of equilibrium. No matter what you do, the ball always returns to the initial position.
	**The "ephemeral forest ecosystem"** Nature is very susceptible to any kind of intervention. Small interventions can make the ball get out of control.
	**The "tolerant/tipping forest ecosystem"** To a certain degree, interventions within nature are permissible. Only when a certain boundary is crossed does the ball get out of control.
	**The "capricious forest ecosystem"** The consequences of interfering with nature are unpredictable. The ball moves non-deterministically.

The nature myths have been both depicted and described (Tab. 3) and can thus be taken as highly reliable. Their appearance was randomized. Of course, they are an auxiliary construct of the perception of nature, developed within a specific mind set as described above. They mainly allegorise how nature reacts to human intervention and leave out the aesthetic or emotional aspects of humans' connection with nature (Meier and Erdmann 2003). As only two Polish foresters indicated that they perceived nature as benign, this category is left out of further analysis.

The question on the importance of the adaption of forestry to climate change related to its importance in the year 2008 in the work context of the foresters. It was only one of fifteen topics given. The question ran as follows: Which of the topics below have been less or more important for your work in 2008?

The items to measure the group and grid dimension were taken from a study of Hampton (1982). They were developed within a project conducted by Mary Douglas "to analyse the concepts of grid and group into two sets of basic elements, such that each element would be logically related to the others". They focused the questions on the social context of the workplace, which fits optimally to the purpose of the study presented here. To keep the length of the questionnaire for the participants within a reasonable time limit, I chose 15 out of the total of 32 relevant items, considering that they are still evenly distributed within the different scales for the group and the grid dimension. For the specific wording of all items, see the results section.

The likelihood-ratio-test showed no relevant statistical significance with a p-value below 0.05. Furthermore, the number of cases for both the ephemeral and the capricious nature myth group is very small (7 and 14 cases respectively). Thus, only descriptive results are presented and discussed.

Results

Nature myths

The results (see table 4) show that indeed foresters of the regional level more strongly adhere to the perverse/tolerant nature myth than the ones of the upper level, who still more strongly adhere to it than the ones of the district level. Both the foresters of the upper and the district level had a comparatively higher share within the ephemeral and/or capricious nature myth groups.

Regarding the main tasks that the foresters were involved in, it can be said that the mainstream group holding the perverse/tolerant nature myth had a higher share in carrying out sovereign tasks compared to the other foresters, whereas the non-mainstream groups were more often in charge of all other tasks. This also indicates that the latter generally undertook a wider variety of tasks. Taking the non-mainstream groups individually, the foresters adhering to the ephemeral nature myth were more often in charge of sovereign tasks and the ones adhering to the capricious nature myth were more often in charge of forest inventory than the other two groups respectively. Thus, no clear tendencies can be distinguished in this regard.

When examining gender as an influencing factor, the hypothesis of women being more non-mainstream

Tab. 4. Differences between Polish foresters, grouped after their adherence to nature myths, concerning different factors (percentage quotation per columns, sample size n in brackets)

Factor		Nature Myths							
		perverse/tolerant		ephemeral		capricious		non-mainstream (eph. + capr.)	
Organizational level	District level	6.1% (7)		0		15.4% (2)		11.1% (2)	
	Upper level	71.9% (82)		100% (5)		76.9% (10)		83.3% (15)	
	Regional level	21.9% (25)		0		7.7% (1)		5.6% (1)	
Main tasks (several answers possible)	Sovereign tasks	47.4% (55)		50.0% (3)		35.7% (5)		40.0% (8)	
	Forest inventory	24.1% (28)		16.7% (1)		28.6% (4)		25.0% (5)	
	Management planning	50.0% (58)		83.3% (5)		50.0% (7)		60.0% (12)	
	Cultivation	40.5% (47)		83.3% (5)		50.0% (7)		60.0% (12)	
	Nature protection/ landscape maintenance	53.4% (62)		83.3% (5)		64.3% (9)		70.0% (14)	
	Advisory services	11.2% (13)		33.3% (2)		14.3% (2)		20.0% (4)	
Gender	Female	21.4% (24)		16.7% (1)		0		5.3% (1)	
	Male	78.6% (88)		83.3% (5)		100% (13)		94.7% (18)	
Years in forestry	Means (stand. err./dev.)	19.83 years (1.08/11.62)		19.83 years (5.21/12.75)		23.62 years (2.90/10.46)		22.42 years (2.53/11.01)	
"Adaptation of forests to climate change" perceived as…	Very important	7.0% (8)	35.9% (41)*	33.3% (2)	66.6% (4)*	16.7% (2)	58.4% (7)*	22.2% (4)	61.1% (11)*
	Important	28.9% (33)		33.3% (2)		41.7% (5)		38.9% (7)	
	Less important	47.4% (54)	64.1% (73)*	33.3% (2)	33.3% (2)*	33.3% (4)	41.6% (5)*	33.3% (6)	38.9% (7)*
	Not important	16.7% (19)		0		8.3% (1)		5.6% (1)	
Total**		84.8% (117)		5.1% (7)		10.1% (14)		15.2% (21)	

* Sum of "very important" and "important" or "less important" and "unimportant", respectively.
** Excluding the two cases which have chosen the benign nature myth.

is totally contradicted. Only one woman deviated from the perverse/tolerant nature myth, and the rest of the non-mainstream foresters were male.

Concerning the years foresters had already been working in forestry, the results show only one small difference: the foresters adhering to the capricious nature myth had on average been four years longer in forestry than the others.

Finally, foresters adhering to the perverse/tolerant nature myth did indeed more often perceive the adaptation of forests to climate change as less important than the others. 35.9% of them perceived it as important or very important. There is a tendency of both non-mainstream groups of foresters towards the other direction: 66.6% or 58.4% perceived this topic as very important or important. On average, 40.2% of the polish state foresters perceived the adaptation to climate change as very important or important. This is a lower proportion than in Germany, where 69.9% of forest professionals perceive it as important or very important.

Social relations

Most of the results (Tab. 5) are quite distinctive, with nine times more than 70% on one side (five times more than 90% on one side). Rather undecided are the items 1, 6 and 8. It is quite possible that they have been understood in different ways, especially "originality" and "another job of same type".

Most of the results of the grid items indicate a low grid value, which means that the work activities were not firmly prescribed. It is mainly due to the own responsibilities the foresters obviously had through being specialized, being responsible for others, having no prescribed time schedule and not always preassigned areas of responsibility (items 2, 7, 9, 3, 4). It is also indicated by autonomous thinking (one cannot stop with when coming home, item 5). Yet item 10 about important rules and regulations at work had been supported by almost all foresters. I assume that this has been attributed to the wider framework of the workplace or the regulation about forests as a work object, but not necessarily to the practical activities the foresters conduct in their everyday work. This result of a low grid value on average does not correspond to the high grid value assumed for the hierarchical cultural context, which accompanies the perception of nature as perverse/tolerant.

Tab. 5. Results of grid and group items (after Hampton 1982) among Polish foresters (percentage quotation per columns, sample size n in brackets)

Items	Yes	No	High value indicated by…
Grid Values			
Short of time at work	47.4% (63)	52.6% (70)	No
Useful in work to have a speciality	71.9% (97)	28.1% (38)	No
Can choose use of time at work	91.9% (124)	8.1% (11)	No
Responsibility limited to well-defined areas	38.5% (52)	61.5% (83)	Yes
Stop thinking about work when get home	23.0% (31)	77.0% (104)	Yes
Work involves originality	53.7% (72)	46.3% (62)	No
Make decisions affecting others	84.2% (112)	15.8% (21)	No
Could find another job of same type easily	42.1% (56)	57.9% (77)	No
In charge of distributing resources to co-workers	85.7% (114)	14.3% (19)	No
Important rules and regulations at work	98.5% (133)	1.5% (2)	Yes
Group values			
Have lunch with work group	2.2% (3)	97.8% (131)	Yes
Help out others at work if have some misfortune	94.8% (127)	5.2% (7)	Yes
Work as part of a close team	80.2% (105)	19.8% (26)	Yes
Work colleagues in home social network	62.7% (84)	37.3% (50)	Yes
Unwritten rules at work involving co-operation	93.2% (123)	6.8% (9)	Yes

All group items except for number 11 indicate a high value, which means that the respondents identified strongly with their colleagues. The fact that almost no one had lunch with the work group (item 11) may be

due to the required flexibility and the area-related character of the work that does not only take place in offices or a factory, for example.

Thus, according to these empirical data, the cultural context of the foresters is mainly categorized as egalitarian, with low grid and high group values. This diverges from the categorizations based on the nature myths (Tab. 6).

Tab. 6. Grouping of Polish foresters following Cultural Theory worldviews on the basis of grid and group items and on the basis of nature myths (percentage quotation per columns, sample size n in brackets)

Cultural context of Polish state foresters	Acc. to grid/group items	Acc. to nature myths*
hierarchical	8,8% (9)	83,6% (117)
egalitarian	74,5% (76)	5,0% (7)
fatalistic	6,9% (7)	10,0% (14)
individualistic	9,8% (10)	1,4% (2)

* Including the two cases which have chosen the benign nature myth.

Discussion and conclusions

Generally, among the factors considered, no significant differences could be found between the foresters adhering to the hierarchical nature myth and the others. In other words, the nature myths are not a highly discriminating factor. There is a stronger tendency for foresters of the regional level to adhere to the mainstream nature myth. Also, female foresters are most likely in accordance with it. The latter is surprising, in light of my hypothesis which expected women to be more different. However, it could be explained by the sociological mechanism of over-adaptation of minorities. The groups of foresters adhering to the egalitarian or fatalistic nature myths are larger in the district and especially upper level of the forestry administration and they pursue a greater diversity of tasks (at least concerning those tasks listed in the questionnaire). As the number of years within forestry has only very little effect on nature myths, it can be assumed that the socialization process within the organization does not play an important role here. It can rather be expected that these basic values referred to in Grid-group cultural theory play a role in the basic decision of whether or not to become a state forester.

A very interesting result of the first part of the analysis is that those adhering to the hierarchical nature myth, indicating a hierarchical cultural context, do perceive adaptation to climate change as less important than the others. Does that mean that climate change is not seen as bringing forests and forestry to its limit of resilience? At least, bigger financial efforts to adapt to climate change are not yet accepted on the grounds that they would be a burden for the population right now that could possibly turn out to be redundant (personal communication with a Polish professor of forestry). The hierarchical culture then supports the approach of waiting for more sound knowledge on future developments before acting. This cultural context is the one that is quite ambiguous concerning strategic action, compared to the egalitarian (be cautious!) and the individualistic context (try everything!). The anticipation of "the right" measures is desired, but these have to be discovered; the utilization of nature is supported, but not beyond its limits of resilience, which have to be identified; long-term planning is as important as short-term planning, but if the respective goals contradict, "the right" balance has to be found. This is congruent with the latent strategy of the hierarchical culture to maintain the internal structure of authority (Schwarz and Thompson 1990). In contrast, the egalitarian culture "needs" the aspiration of community, and the individualistic culture the will to preserve the individual's freedom, in order to keep up their beliefs and strategies. In the fatalistic culture however, the individual strives for survival in the face of overwhelming circumstances. The associated way of thinking is that one cannot help it anyway. But this does not tell anything about how important an issue is perceived (they are not asked about it anyway). What if they are asked? In this study, it turned out that those associated with the fatalistic culture do perceive the adaptation to climate change as more important than the average. That indicates that they would rather try to do something about it if they thought it would make a difference. Thus, if many people within an organization or society are shaped by fatalistic thinking, it could be a strategic measure for political actors that want to address climate change challenges to activate them.

The picture given by the analysis based on grid and group items mainly differs in regard to the grid dimension: while the perverse/tolerant nature myth is associated with the hierarchical culture (high grid, high group), the grid values are rather low here. Thus, according to these measurements, the egalitarian culture is predominant among foresters (74.5%). I consider that this adds important aspects to the ascertainment of the cultural context of state forestry organisations. Although they are clearly hierarchically structured, the kind of work that each forester has to fulfil is such that typical hierarchical characteristics may be blurred. The foresters' work leaves room for reasonable freedom as the object, the forest, is diverse or even unique on each site that foresters have to manage and different social circumstances have to be considered. The different theoretical concepts about forest management approaches and the typology of forest ecosystems behind them always have to be adapted to the real circumstances on-site. These concepts and typologies have been pushed forward within hierarchical cultural contexts, just like the hierarchical organization of state forestry itself. However, the aspiration of the hierarchical culture to control everything and to put everything in the right order comes to an end when dealing with living nature. Thus, I conclude that the state forest organization oscillates between hierarchical and egalitarian culture.

Referring to the typology of "sustainable forest management" of Schanz (1996) (Tab. 1), both of these cultures attach importance to institutions and foresighted action, although with different background logics. The only aspect that points to a conflicting difference concerns the spatial scale that sustainable forest management is preferably applied to. While in the hierarchical context, large-scale approaches are favored, the egalitarian culture favors small-scale solutions. Thus, the result of the Polish state foresters' cultural context oscillating between the hierarchical and egalitarian culture mirrors the conflict of centrally conceptualized goals and strategies and their local implementation.

As mentioned above, this study does not claim to test Grid-group cultural theory, as this would require many more investigations with different methods including interviews and participatory observation. Maybe it serves as a small piece of the puzzle for further research on the cultural context of natural resource management in Poland. Understanding cultural contexts means to understand the socio-cultural basis without which any action or decision is impossible.

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